Dr Ely

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Original Communications.

TWO CASES OF OVARIOTOMY.

By John Homans, M.D. Harv.

CASE I.—*Double Ovariotomy; Death; Autopsy; Peritonitis; Cancer of the Stomach and Peritoneum.*—A single woman, a domestic, 32 years of age, entered the Carney Hospital, June 8, 1872. The right umbilical and iliac regions were occupied by a hard tumor, irregular in shape and outline, and somewhat flattened; the growth, also, projected downwards between the uterus and rectum. The girth at the umbilical level was twenty-nine inches, and it was fourteen inches from the sternum to the pubes. The tumor or tumors were freely movable and there were no adhesions. Fluctuation was doubtful. The needle of the aspirator was entered at the most elastic spot, and about a drachm of clear straw-colored fluid was drawn out. The bladder was depressed. The uterus was normal in situation, the cervix being quite short; the length of the uterine cavity was normal. The woman's health had been fair until four months since, when she experienced a feeling of soreness across the centre of the abdomen. Two months later three tumors about the size and shape of flattened lemons were noticed in the right iliac region. At the time I first saw her, there was considerable emaciation, and much pain and vomiting. She begged that an operation might be performed, and hoped that she would be relieved from her distress either by recovery or death. She had come from Worcester, having been induced to do so because another woman, with ovarian tumor, from that city, had been cured at the hospital.

On June 18th the operation was performed. Drs. Langmaid, Hayden, Cowles, Draper, Wheeler, C. D. Homans, J. O. Green and several other gentlemen were present. She was placed on the table in a fine large airy room, overlooking the city and harbor; the rubber sheet with an oval opening was placed over the abdomen and clothes; it was kept on by adhesive plaster spread on its inner edge, in the manner that Mr. Spencer Wells practises. She was then etherized. The cysts were exposed by an incision extending from two inches above the umbilicus to the pubes. Several cancerous-looking nodules were seen in the peritoneum in the line of incision. The abdomen contained about four pints of clear ascitic fluid. The right ovary was first removed; there were no adhesions; the pedicle was clamped, but the clamp was removed on account of the dragging on the uterus. A silk ligature was applied and cut off short. The left ovary was then removed, and the pedicle secured by a silver wire ligature, and, as there was some hæmorrhage, by a silk one also; both were cut off short. The wound was closed by deep and superficial sutures of silk.

The right ovary, the one first removed, was found to be nearly solid; its structure was cystic, the cysts varying from those of microscopic size to the size of an English walnut. The whole mass was about as large as the adult human brain. The left ovary was of the same structure as the right, but not as large. One weighed four and a half pounds, the other three. Cotton batting was laid over the abdomen, and a binder of sticking plaster applied. It was curious to see the ascitic fluid collect in the pelvis during the operation; the pelvis would be sponged dry, and in a few minutes a drachm of clear, limpid serum would accumulate, seemingly poured out from the peritoneal walls. The pulse was 120 after the operation, and the respiration feeble.

June 19th. There was no vomiting till midnight, eight hours after the operation. At 7, A. M., the pulse was 146. There was great thirst, but no tenderness, or pain. The vomiting continued with more or less intermission till her death, which took place at 2, A.M., June 20th, about forty hours after the operation.

At the autopsy, the incision was found firmly united. The coils of intestine were of a red color, and covered more or less with flakes of lymph, which glued them together. Dr. Fitz examined the stomach and found in it a tumor about the size of the palm of the hand, occupying nearly the whole of the lesser curvature. It was ulcerated, especially toward the centre, the mucous membrane being destroyed. Nodules of cancer were found on the uterus, mesentery and peritoneum. In this case, the patient's pain, distress and vomiting were caused by the cancerous affection of the stomach and bowels, and not by the more obvious ovarian disease; and had the exact condition of things been known, the operation would not have been performed. By her death, however, she was spared much suffering.

CASE II.—*Ovariotomy; Death; Peritonitis.*—A single woman, 49 years of age, a school-teacher, came to the Carney Hospital from Nantucket, on April 22, 1873. A large cyst filled the abdomen from the sternum downwards. It had been of seventeen months' growth. The girth at the umbilicus was forty-five inches, and it was twenty-two inches from the sternum to the pubes. She was in good spirits, and her general health was fair, though feeble. Both feet were somewhat œdematous, and there was a trace of albumen in the urine. The uterus was normal and virginal. The catamenia ceased a year ago. The pulse was 76, of fair strength.

The patient decided to have the operation performed, after its dangers had been fairly placed before her, and on April 24, 1873, it was done. Drs. Greenough, Langmaid, Anderson (of Cincinnati), Hayden, J. O. Green, Hartnett, Winslow Lewis, C. G. Putnam, C. D. Homans, Thaxter, W. G. Wheeler, Doherty, Ferguson, J. P. Reynolds, Bixby and Mr. Appleton were present. The patient was etherized and the india-rubber sheet used as before. The cyst was exposed by an incision about four inches long, midway between the umbilicus and pubes. Spencer Wells's large trocar was used, and the contents flowed well through the tube for a few minutes, but a partition wall in the cyst blocked the end, and the tube was withdrawn. Drs. Greenough and Anderson carefully kept the sides of the peritoneum in connection with the cyst wall, and no fluid ran into the peritoneal cavity. The cyst was universally adherent; the adhesions were separated easily by means of the finger, and the cyst withdrawn. The pedicle was found to be the broad ligament and too short for a clamp, consequently the cyst was tied *en masse* about two inches from its origin and cut off. The ligature used was a large carbolized one of hemp. The stump was easily kept outside of the abdomen, and the wound sewed up around the pedicle, the sutures being of carbolized hemp. Less than two drachms of blood were lost. The sponges used were perfectly new. The catheter was used every seven hours by Dr. Anderson (to whom both the patient and myself were deeply indebted), and she was fed on beef essence and brandy. At the conclusion of the operation, the pulse was 85, and the respiration good; there was slight vomiting at midnight, but it ceased and did not return. During the next day, the pulse ranged from 100 to 110, and the temperature from 100° to 100½°. On April 26th, she was reported to have passed a good night; there was no tenderness, but distention of the abdomen from gas took place; an enema of castor oil and turpentine relieved this a little. The pulse varied from 112 to 150, and the temperature from 101½° to 102¼°. At 5, P. M., one superficial and one deep suture removed. At 10, in the evening, there was threatened collapse, but recovery to her former condition took place.

April 27th.—Distention continues; she takes food, champagne, &c., well. The pulse varied from 126 to 136, and the temperature stood at 101¾°. In the afternoon, all the sutures were removed, the wound was opened behind the pedicle, and about six ounces of dark-colored fluid ran out. A very dilute solution of chloride of soda was injected through an elastic catheter and brought out several flakes of lymph. As there was considerable pain at this time, about one-sixth of a grain of morphine was injected subcutaneously. Mind wandering. At 9, P. M., a drainage tube was put in by the side of the stump of the pedicle. She gradually failed, and died at 6, A. M., April 28th, eighty-six hours after the operation.

At the autopsy, the abdominal wound was well united, except where it had been opened. The colon and stomach were greatly distended by gas. The intestines were more or less glued together by recent lymph. The uterus was of a deep-red color, and more or less covered with purulent lymph. There were about seven ounces of brownish-colored fluid in the peritoneal cavity, and there were numerous ecchymoses between the peritoneum and muscles in the anterior abdominal walls. There were no coagula, nor signs of hæmorrhage. Possibly the result of the operation would have been different, had it been performed before the patient had become so much reduced in strength.

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TATOOING THE CORNEA.

By Henry W. Williams, M.D.

Read before the Boston Society for Medical Observation.

The removal of conspicuous blemishes of the cornea by a safe and nearly painless process of tatooing deserves to be regarded as one of the most valuable recent improvements in ophthalmic surgery.

Although known to the ancients from the time of Galen, it had quite fallen into oblivion; and, though not having the importance of those capital operations which preserve or restore the sight, it yet confers a great benefit upon patients by ridding them of what is often a marked or even a repulsive deformity.

The central part of the leucoma may be tinted with India-ink, to represent the pupil, and the marginal portions of the opacity with brown, blue, or other water colors, to correspond with the tint of the iris in the other, healthy eye. The ink should be rubbed up with water to the consistence of a thick paste, and may then be preserved for use, in a fluid condition, by adding glycerine.

The process of pricking in should be begun at the lower part of the space it is intended to cover. Wecker uses a spring elevator, to keep the lids separated; but this is more complained of than the operation itself, and is not necessary. It is sufficient to press the lids open with the thumb and finger, which may be covered, as suggested by Warlomont, with a bit of rag, to prevent slipping and to absorb the tears. A cataract needle, an instrument composed of several very fine sewing needles bound together and inserted into a handle, or any delicate pointed instrument, may serve for the tatooing. A little of the thick pigment being taken up on the needle and placed upon the cornea, a large number of punctures are rapidly made, through the epithelial layer only, over the surface it is proposed to color, and the pigment is then gently rubbed into the punctures with the end of the finger.

Usually there is not much sensitiveness in the parts, and it is sometimes possible to accomplish nearly as much tinting as is needed, over a considerable space, at a single sitting. In other more sensitive subjects this cannot be done, and the tatooing must be repeated, perhaps three or four times, to obtain the desired result. Generally, so much can be gained at a single performance that a patient appreciates the resulting benefit and willingly consents to a repetition of the tatooing.

If possible, the use of forceps to hold the eyeball should be dispensed with. If used, the conjunctiva should be taken hold of above the cornea, so that, in case the coloring matter should reach the punctures made by the forceps, the stain which would result may be so placed as to be concealed by being covered by the upper lid.

This operation should not be performed in cases where we find only a recent opacity of the cornea, as in many of these instances we may expect a gradual absorption of the cloudiness, especially if the patient is young. Of course it is needless to resort to this means, intended mainly for cosmetic effect, where both eyes are sightless, unless in exceptionally great deformity. But, where one eye is perfect, the removal of a blemish from the other is often a great boon to sensitive individuals, especially to ladies.

Scarcely any precautions are needed after this little operation, and it may safely be repeated in a few days, sometimes in a day or two if desirable. It may be undertaken by any physician having a delicate touch, even if quite inexperienced in eye operations. It should not be done, however, while any lingering irritation of the internal parts of the eye is present. It is especially adapted to cases of dense opacity, either partial or affecting the whole extent of the cornea. It may also be resorted to with advantage in some special conditions, where the cornea is transparent, but where it is desirable virtually to limit the area of the pupil by excluding some of the pencils of the rays of light; as, for instance, in some cases where iridectomy has been done, or in conical cornea.

SALIVATION IN IRITIS.—Dr. A. D. Williams, of St. Louis, expresses his dissent from the views of Dr. Ricord as announced at the last meeting of the British Medical Association, so far as relates to the advantages of salivation in the treatment of syphilitic iritis. The treatment of this affection, which, by the way, is self-limited, and of short duration, should be directed first to the relief of the acute inflammation of the iris, and afterwards to prevent the bad consequences which result from this inflammation, viz., the adhesions which form between the pupillary margin of the iris and the crystalline lens. These synechiæ always interfere materially with vision, and leave the eye in a state of tension, which is liable to excite repeated attacks of the inflammation. Mercury is, of course, to be recommended in this affection, with the view of counteracting the syphilitic poison in the system, but the local treatment is, after all, the most important. This consists in the *energetic* use of atropine in the eye, so as to dilate the pupil to the fullest extent, combined in severe cases with the application of leeches.—*Medical Archives*, March, 1873.

Progress in Medicine.

REPORT ON MEDICAL CHEMISTRY.*

By EDWARD S. WOOD, M.D.

A new Reagent for the Detection of Blood Pigment.—Prof. F. L. SONNENSCHEIN (*Vierteljahrsch. f. gericht. und öffent. Med.*, 1872, No. 4) recommends a saturated solution of sodic tungstate, which has been previously acidulated with acetic acid, as a reagent for the precipitation of hæmoglobin from solutions which contain it. This reagent forms, with all of the protein compounds, a precipitate, which is insoluble in dilute acids, but readily soluble in alkaline fluids, and is more delicate than "Millon's reagent" (nitrate of mercury), which is generally used for the detection of small amounts of these compounds.

It gives, with a very dilute solution of blood, a reddish-brown or chocolate-colored precipitate, which is bulky at first, but collects together upon being boiled into a small volume. This precipitate is soluble in ammonia water, to form a solution of the same color as the solution of a corresponding amount of blood in ammonia, and can be re-precipitated by the addition of an acid.

The chief value of this reagent is, that it appears to precipitate the hæmoglobin as such, without first decomposing it into hæmatin and globulin, and, also, that it precipitates this pigment from very dilute solutions, so that we are enabled by its means to obtain a concentrated from a very dilute solution. Moreover, since the precipitate produced is a stable compound, and admits of being dried, we can preserve a given specimen of blood coloring matter for any desired length of time.

Sodic molybdate acts in precisely the same manner as sodic tungstate.

The Condition of the Alkaline Earths and Phosphoric Acid when dissolved in the Blood.—From the experiments of A. P. FOKKER (*Pflüger's Archiv*, Nos. 4 and 5, 1873), it appears probable that it is in combination with albumen that calcic phosphate exists in the blood, since he was enabled to obtain such a combination artificially which gave the same reactions as the blood serum.

In the first place, he prepared compounds of the calcic and magnesic oxides with albumen, by dusting over the surface of some filtered egg albumen a little slaked lime or oxide of magnesium, these compounds corresponding to the alkali albuminates formed by the action of the hydrates of sodium or potassium upon albumen.

The calcium albuminate is soluble in water, the solution having an alkaline reaction, and becoming turbid if exposed to the air, owing to the absorption of carbonic acid and deposition of calcic carbonate. The aqueous solution is not coagulated by boiling, but is decomposed by the addition of sodic or potassic hydrates, these reagents forming the sodic or potassic albuminates and calcic hydrate which is precipitated if the solution is sufficiently concentrated. Calcic albuminate is insoluble in dilute hydrochloric or nitric acids, soluble with difficulty in acetic acid, but readily soluble in phosphoric acid, with the evolution of sulphuretted hydrogen. This phosphoric acid solution is also decomposed by potassic hydrate, potassic albuminate and calcic phosphate being the products of the decomposition. If sodic phosphate be added to calcic albuminate, a precipitate of calcic phosphate takes place, but this is explained by the fact that a part of the phosphoric acid of the reagent unites with the albuminate, and the free alkali thus formed acts as usual to form the sodic albuminate and calcic phosphate; this change, however, can be prevented by the previous addition of a little acid to neutralize the alkali as it is formed, and no precipitate takes place when a solution of the albuminate is acidulated with phosphoric acid and then neutralized with sodic carbonate. Carbonic acid gas, passed through a solution of the albuminate, causes a precipitate of calcic carbonate, which an excess of the gas re-dissolves, as in the case of the ordinary calcium salts; and if to a solution thus treated sodic carbonate and sodic phosphate be added, no precipitation takes place, even upon boiling, thus showing conclusively that the calcium is not in combination with the carbonic acid or the phosphoric acid alone, for the excess of carbonic acid (which could hold the carbonate in solution) would be expelled by boiling, and the phosphate is insoluble in alkaline solutions. Oxalic acid or ammonic oxalate precipitate from an aqueous solution of the albuminate calcic oxalate and the whole or a part of the albumen.

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* Second semi-annual Report.

The magnesium albuminate has nearly the same properties as the calcium compound.

Test for Sulpho-cyanides in Saliva.—(*Fres. Zeit.*, 1872, No. 3, from *Archiv der Phar.*, Bd. 198.) R. Böttger recommends the use of guaiac paper. This paper is made by moistening a strip of filter paper with tincture of guaiacum, drying it, and then passing it through a dilute solution of sulphate of copper (1 : 2000). A blue color is instantly produced by moistening paper so prepared with saliva.

Test for Cholesterin by Means of Sulphuric Acid and Chloroform.—E. Salkowski. (*Fres. Zeit.*, 1872, No. 4.)—This delicate test for cholesterin is performed in the following way. Dissolve a few crystals of the cholesterin in chloroform, add an equal volume of strong sulphuric acid, and shake the mixture. The chloroform becomes quickly colored blood red, then cherry red or purple, which color is permanent for several days. At the same time, the sulphuric acid shows a strong green fluorescence. If the red chloroform solution be poured into an evaporating dish, or into a test tube which contains the slightest trace of moisture, it quickly changes to a blue, then to a green, and, finally, to a yellow color; but if the test tube be perfectly dry, the red color is retained. The red or purple color can be restored to the decolorized chloroform by shaking again with sulphuric acid. The addition of alcohol, ether, or even fresh chloroform, to the red solution will deprive it of its color. Glacial acetic acid causes the color to change to a blue.

Recognition of the Biliary Pigments by means of the Spectroscope.—B. J. Stockvis. (*Fres. Zeit.*, 1872, No. 4, from *Ber. d. deutsch. chem. Gesell.*, v., p. 583.)—If urine, which contains biliary pigments, be treated with a little zinc chloride and then ammonic hydrate in excess, it assumes, after being filtered or shaken with air, a brownish green color, and if this fluid be subjected to the action of the spectroscope, three distinct absorption bands are visible. One is a dark and well-defined band in the red, between the Fraunhofer lines C and D, beginning at C and ending near D. The second is at the junction of the orange and yellow, between the lines D and E, beginning near D, and is narrower and more clearly defined than the first. The third is a small and not well defined band, and also lies between D and E, but near E; this band is not peculiar to jaundiced urine, as the first two are. If the urine contains but a very small amount of pigment, it must be precipitated with acetate of lead, filtered, and the precipitate decomposed by an alcoholic solution of oxalic acid. The resulting fluid, after the addition of zinc chloride and ammonic hydrate, shows the above absorption bands, if placed before the slit of the spectroscope.

The substance, which gives rise to these absorption bands, is one of the oxidation products of bilirubin, termed by the author choloverdin, neutral solutions of which fluoresce into red; but of the alkaline solutions, only the ammoniacal fluoresce. It is soluble in alcohol, ether, chloroform and amyl alcohol, the last three solvents not being capable of removing it from alkaline solutions. All solutions which contain choloverdin, also contain another substance, described as a reducible substance, which is present in all fluids containing any of the oxidation products of the biliary pigments, even if the fluid has been acted upon by nitric acid. If reduced by sulphide of ammonium or sugar, an absorption band appears between D and E. This substance is soluble in water and alcohol, less so in ether and chloroform, and is very stable in acid solutions, but not at all so in alkaline fluids.

The chief value of this test is, that it permits the recognition of the biliary pigments in fluids when the normal pigments, bilirubin, &c., have been so changed by oxidation that they are no longer recognizable by the ordinary Gmelin's test.

Detection of the Biliary Acids in Normal Urine.—Prof. VOGEL gives the following simple process for the detection of the biliary acids in normal urine. (*Fres. Zeit.*, 1872, No. 4, from *Tagebl. der* 45, *Versamml. deutsch. Naturf. u. Aerzte in Leipzig*, No. 5, p. 75.) Four or five ounces of the urine should be acidulated with a few drops of hydrochloric acid, and shaken for at least on hour with chloroform. The chloroform, which has become brown and turbid, can be separated from the urine by decantation, or with a pipette, and rendered clear by shaking with six or eight centimetres of absolute alcohol. This mixture is then to be filtered, and the chloroform separated from the alcohol by means of a pipette, and allowed to evaporate on a watch glass. If this residue, which has a bitter taste, be treated with sugar and concentrated sulphuric acid, a violet color is produced, first around the grains of sugar; this color becomes changed to a brown in fifteen to thirty minutes. (Pettenkofer's test.)

In this manner, Vogel found a small amount of the biliary acids in the urine of eight healthy individuals, and also in that of persons suffering from various diseases. In fact, no specimen examined failed to give the reaction for the biliary acids, when treated in this manner; and the color was more strongly marked in the urine of patients with disease of the liver. (Three cases of catarrhal icterus, one of carcinoma of the liver, and one of cirrhosis.)

In order to be sure that this reaction was not caused by other substances, which may give a somewhat similar color with sugar and sulphuric acid (such as albumen, muscular fibre, various resins and oils, phenol, &c.). Dragendorff evaporated a litre of the urine of ten healthy individuals, varying in age from 8 to 55 years, extracted the residue several times with alcohol, evaporated this, and dissolved again in water. This solution was precipitated with acetate of lead, dissolved in alcohol, and decomposed with sodic carbonate, carbonate of lead and glycocholate of sodium, being the products of the decomposition, the latter remaining dissolved in the alcohol. From this solution the glycocholic acid was isolated, and its identity confirmed by Pettenkofer's test.

Not satisfied with this result, Dragendorff, by working with a large amount of urine (100 litres) in the above way, succeeded in obtaining a sufficient quantity of the acid to enable him to purify it by re-crystallization and make an ultimate analysis of it, thereby proving beyond a doubt that the substance which thus reacts with Pettenkofer's test in normal urine is composed of the biliary acids, and that these do, under normal circumstances, find their way into the general circulation in small amounts, and are partially eliminated by the kidneys.

Separation of Carbolic Acid from Urine.—E. Salkowski. *(Fres. Zeitsch.*, No. 3, 1873, from *Archiv d. Physiol.*, Bd. v., p. 353.)—The urine is made strongly acid with tartaric acid, and distilled until about one half of the liquid has passed over. The distillate should then be shaken twice with ether, the ether decanted, and allowed to evaporate. The residue can then be treated with a little water, filtered if necessary, and Lex's test (see below) applied.

In 200 cc. of normal urine, no carbolic acid can be detected, but if 0·1 grm. be added (= 1 part in 2000), an intense blue coloration is produced, and this color can be perceived when the urine contains only one part in 4000.

Lex's test for carbolic acid is performed with ammonic hydrate and calcic hypochlorite (chloride of lime). To the suspected fluid is added about one fourth of its volume of ammonia water, and then a few drops of a saturated solution of hypochlorite, and the mixture gently warmed to boiling. If much carbolic acid is present, a blue color appears immediately; but if only a minute amount, it does not appear until about fifteen minutes have elapsed. Too much calcic hypochlorite, or a too rapid application of heat, prevents the reaction. The fluid which has once turned blue may become colorless by standing; but the color can be restored by the addition of a few more drops of the hypochlorite. If the fluid is acidulated with sulphuric or hydrochloric acids, the blue changes to a red color.

Quantitative Determination of Uric Acid in Diabetic Urine. E. Kulz. *(Fres. Zeitsch.*, 1872, No. 3.)—For this purpose a large amount of the urine should be used (the whole amount passed in twenty-four hours), placed as soon as passed in a cool place, and one or two cubic centimetres of a solution of creasote added, in order to prevent fermentation from taking place. When the whole amount for twenty-four hours is collected, 1000 cc. (2·1135 pints) should be filtered off, precipitated by the addition of 80 cc. of a solution of acetate of lead, and 540 cc. of this mixture (corresponding to 500 cc. of urine) quickly filtered off. To this 540 cc. should be added a concentrated solution of mercuric acetate, until no further precipitation is produced. After being allowed to stand for twelve hours, this precipitate should be collected upon a filter paper, thoroughly washed, and finally decomposed by sulphuretted hydrogen in a flask, into which both filter and precipitate have been introduced together. The mercuric sulphide thus obtained must be thoroughly freed from uric acid by boiling several times with water which contains a little sodic carbonate, filtering, and the uric acid precipitated from the filtrate by hydrochloric acid. It can then be dried and weighed in the ordinary manner.

Test for Grape Sugar.—Campani recommends (in *Fres. Zeitsch.*, 1872, No. 3, from *Arch. d. Pharm.*, Bd. 198) the use of a saturated solution of basic acetate of lead, mixed with a little dilute solution of acetate of copper. To about 5 cc. of this solution is added a little of the suspected fluid (urine, for instance), and the mixture boiled. If sugar is present, a yellow color is produced, and a yellow precipitate settles after a while. This change takes place if only $\frac{1}{100}$ per cent. of sugar is present. If more than one per cent. is present, the color of the solution and precipitate is orange red.

A new kind of Urinary Calculus in Oxen.—Dr. Giorgio Roster describes, in the *Ann. d. Chem. u. Pharm.* (Bd. clxv. i., p. 104), a calculus occasionally seen evacuated with the urine of the oxen in the neighborhood of a town in Tuscany. The largest of several received by him weighed 1·02 grm. (15·7 gr.), and the smallest 0·15 grm. (2·3 gr.). These concretions were light, readily floating on water, of a straw-yellow color, or often with a greyish tinge, and easily reduced to powder in a mortar, although too hard to be crushed between the fingers. The powder, examined under the microscope, was seen to consist of transparent prismatic crystals, resembling those of hippuric acid, very soluble in boiling water, but separating from it in crystals upon cooling. These crystals are insoluble in alcohol and ether, and, when heated on platinum foil, first melt and then char, with the evolution of an odor resembling burnt sugar. The ash, which is left, consists of pure oxide of magnesium. Upon analysis, these crystals were found to be the magnesium salt of a new organic acid, called by Dr. Roster lithuric acid, or lithurate of magnesium.

Prussic Acid Tests in Chemico-legal Investigations.—According to the experiments of Almen (*Fres. Zeitsch.*, 1872, No. 3, from *N. Jahr. d. Phar.*, B. 36, p. 226) and H. Struve (*Fres. Zeitsch.*, 1873, No. 1, p. 14), by far the most delicate test for prussic acid is the blue color which it produces, when in contact with Schönbein's test paper. (For the preparation of which, vide test for the sulpho-cyanides in saliva, p. 7.) But since the same reaction may be produced by a large number of other substances, as nitric, nitrous and hydrochloric acids, chlorine, bromine, iodine, ammonia, dilute sulphuric acid, chromic acid, potassic bichromate, and many other substances, this test cannot be relied upon as a final test, but is chiefly valuable as a preliminary test. The paper should be exposed to the fumes arising from a mixture supposed to contain prussic acid, air being drawn through the mixture by means of an aspirator. In this manner, it was possible to detect $\frac{1}{1000}$ grain in seven ounces of urine, which corresponds to a dilution of one part in three million, and, according to Preyer, this test will detect one part in twelve million. This test involves no loss of substance, and distinguishes certainly between the volatile prussic acid or its salts (which are decomposed by carbonic acid at the ordinary temperature of the atmosphere) and the ferro-, ferri- and sulpho-cyanides, all of which contain cyanogen, but are not volatile or decomposed at the ordinary temperature. If the presence of prussic acid is rendered probable by this preliminary test, a portion of the substance should be distilled, in order to isolate the prussic acid from the organic matter, and the distillate tested in the ordinary ways by the silver, iron and sulphur tests.

A modification of the most delicate of these (the sulphur test) is strongly recommended by both Almén and Struve, as follows. The distillate, after the addition of ammonic sulphide to form the sulphocyanide of ammonium, should not be evaporated to dryness at once, because this sulpho-cyanide is volatile to a considerable extent at the temperature of 212° F., and may easily be lost if only a small amount be present. A few drops of sodic or potassic hydrate should be added previous to the evaporation, in order to form the sulphocyanide of sodium or potassium, which are not volatile at this temperature. Then evaporate nearly or quite to dryness, add a few drops of water, acidulate with hydrochloric acid, and, finally, add a drop or two of ferric chloride, when the characteristic blood-red sulpho-cyanide of iron will be formed.

Poisoning by Alum.—A fatal case of poisoning by the ordinary potassium alum is reported in full by Dr. Hiequet *(Ann. d'Hygiéne,* Jan., 1873), with the chemical analysis of the tissues and remarks upon the toxicology of alum. It was caused by the accidental ingestion of about an ounce instead of Epsom salts. The symptoms and lesions produced were those of a corrosive acid poison, there being found destruction of the epithelium in the mouth, throat, œsophagus and stomach, two gangrenous patches in the small intestine, and also extensive peritonitis.

This is the only fatal case fully reported, although another is mentioned by Taylor, without any details of the case, and a non-fatal case is reported by Orfila, who, in his report, gives, as the result of his experiments and observations, the following conclusions among others :—that, when taken in large doses, death may be caused by alum in man, if vomiting and purging do not take place ; and that it acts much more severely upon persons afflicted with chronic gastric disease than upon others. Both of these conditions existed in the patient whose case is reported.

(To be concluded.)

The Hospitals.

BOSTON DISPENSARY FOR DISEASES OF THE NERVOUS SYSTEM.

Report of 211 Cases, by D. F. Lincoln, M.D., Physician in charge.

This institution was opened in May, 1872, and the present report is based upon the cases received within the first thirteen months, seven very recent ones being omitted. A few, not strictly proper subjects for treatment by the Dispensary, were received for special reasons; they are noted in the last few lines of the table.

The number of curable cases which left before any benefit could possibly be gained, is much to be regretted, especially in those instances where neglect must involve the crippling for life of a young child affected with paralysis. It will be noticed that in some of the selected cases described below, no account of treatment is given; such are cases where the patient came only once or twice.

	Relieved.	Not relieved.	Left.
Myalgia,	18	—	1
Muscular atrophy,	—	—	4
Rheumatism,	3	2	—
Congestion of cord,	1	—	1
Congestion of plexuses, &c.,	3	—	—
Neuralgia,	6	—	3
Hemicrania,	1	—	—
Hemidrosis,	—	—	1
Anæsthesia cutanea,	2	—	—
Impotence,	—	—	2
Incontinence of urine,	—	—	1
Hemiplegia, R.	1	—	3
" L.	4	—	3
Paraplegia,	—	—	1
Aphasia,	—	—	1
Infantile paralysis,	—	—	3
Myelitis,	1	1	—
Locomotor ataxia,	—	2	—
Peripheral paralysis,	5	1	2
Post-variolar paresis,	1	—	—
Epilepsy,	5	—	3
Chorea,	—	—	1
Paralysis agitans,	—	3	2
Tremor and spasm of fingers,	1	—	3
Spasm of thigh,	1	—	—
Torticollis,	—	1	—
Asthenia,	22	1	24
Mental derangements,	2	—	3
Vertigo,	2	2	1
Insomnia,	3	—	—
Palpitation,	—	1	1
Deafness,	1	—	1
Dyspepsia,	—	—	3
Saturnism,	3	1	1
Alcoholism,	—	—	2
Injury to joint and other surgical lesions,	4	—	6
Leucorrhœa, eczema, bronchitis,	4	—	1
	94	15	78

To these add seven very recent cases, and eighteen referred to other ambulances, making a total of 211.

AFFECTIONS OF THE MUSCULAR SYSTEM.

Myalgia, strictly so called, is almost invariably relieved, or cured, by one or a few applications of the *faradic* current. The table includes, under this heading, perhaps rather loosely, a few cases of pain and weakness due to strain of muscles or aponeuroses, and to Colles's fracture. The following account is somewhat remarkable:—

Case 1.—W. W., gardener, æt. 57. Has been treated nine years for muscular rheumatism, contracted through exposure to the weather while in the U. S. Army. For two months past, has been unable to work. The anterior border of the left cucullaris, near its middle, is the seat of severe pain, which is excited, first, whenever he makes the motion of putting his coat on; second, when he flexes the forearm; third, when a portion of the inner aspect of the biceps is touched, which was the original seat of his pain. A *galvanic* current was applied as follows:—From biceps to hand, xxx. cells, five minutes; from edge of trapezius to hand, xx., five minutes; from spinal attachment of trapezius to hand, xx., three minutes. Immediately afterwards, he could execute all the movements of the hand and arm without pain, whereas, when he came in, he could scarcely move those parts at all. He came again in a week, and the cure seemed to be permanent.

In a certain number of cases, congestion of the roots of spinal nerves, or of the plexuses, may be assumed to be present. The spine, or a plexus, may be tender; there is much pain, weakness, numbness and formication in the affected limb. Two such cases, originating in the concussion of violent falls, have been greatly benefited by the use of both orders of the current; one of these is here subjoined.

Case 2.—T. W. B., tailor, 39. May 11, 1873. Fell on the ice last February, striking back of head and shoulders, and remaining insensible for some minutes; on coming to, he did not regain the power of moving his limbs for twenty minutes. Has done very little work since; every attempt has brought on pains, tingling sensations, and debility, specially in the muscles used in sewing, but also in the other limbs. Shooting thrills of "numbness," and sometimes of heat, through limbs.

S. P.—Great debility is shown in his gait, and the grip of his left hand is weak. Totters slightly when eyes are shut. Senses:—Touch in left leg diminished; left hand (finger pulps), *one inch*; right, normal. Pain, tickling, heat, normal. Occasional chilliness in limbs and, when he rises from a stooping posture, slight shooting pains in the thighs. Much lameness in shoulders; tenderness of cervical vertebræ. No motor paralysis, no ataxia and no girdle sensation. Galvanism to spine and cervical plexus and limbs.

May 18th.—Tactile sense, *left* hand, one-third and one-quarter inch; *right*, one quarter inch.

May 28th.—Reduced still further, viz.: to one-sixth and one-fifth respectively.

The muscles of the neck and shoulder were faradized a few times with much benefit. Discharged in July, tolerably well, but rather feeble.

PROGRESSIVE MUSCULAR ATROPHY.

Case 3.—W. M., clerk, æt. 35. His legs are very feeble, and greatly wasted; he can walk only ten minutes at a time. The arms are much less badly wasted; the interosseous muscles and the balls of the thumbs are pretty well nourished. The faradic current acts upon all these muscles with a force proportionate to their apparent bulk. The disease commenced a year ago, when he suffered much from pains in his legs for a time; he frequently has pains in his feet when he stands too long, as is required by his occupation. Networks of fine cutaneous bloodvessels are seen above the ankles. He never suffered from cramps, formication, or anæsthesia. It is worthy of remark, that he suffers much from somnolence and low spirits; he is very easily moved to weep. There is no ataxia. He did not return for treatment.

HEMIPLEGIA.

Case 4.—J. W., æt. 2 years, 3 months. Was a very healthy child till the attack. Six months ago he was suddenly seized at eleven in the night, with vomiting and high fever. Next morning "he could stand, and I think he had the use of his hands; he took the drink out of my hand." At noon, he was found by his mother lying in a chair, looking as if he were dying, with a pale face, eyeballs rolled up, "low" pulse, feeble consciousness, convulsive movements of right hand and leg. This condition of things lasted for at least a day and a night. When he got a little better, his hand and leg were quite useless; it was a month before he could crawl, and a month longer before he could walk. No further gain was made after these two months. At present he halts a little in running, his hand is quite feeble, and the arm is decidedly emaciated. Reaction to the faradic current, good. His mother did not bring him again.

LOCOMOTOR ATAXIA.

Cases 5 and 6.—Catharine L., æt. 18, and Jeremiah L., æt. 14, are remarkable, as instances of locomotor ataxia occurring in a brother and sister. The rest of their family are stated to have been perfectly healthy persons. The cause assigned by the relatives is bathing in salt water, in which both children indulged themselves to great excess, eight years ago; it appears, however, that the girl had already begun to suffer from tremor and awkwardness in the use of her hands, many months before she bathed at all; the boy began to experience a difficulty in walking, after two or three months of bathing. Their gait is thoroughly ataxic; they stoop forward and carefully fix their eyes on the floor in front of them; can walk a mile at the furthest. When their eyes are closed they are unable to stand. Motions of the arms and legs, which they perform with tolerable accuracy while their eyes are open, or by daylight, fail, or are very badly done, if they are prevented from seeing. There is a good deal of muscular force in all the limbs; it is quite hard to flex or extend the legs of the boy, while he is making resistance, although when he walks, he presents a very picture of feebleness. So much is said, to justify the application of the term "locomotor ataxia." But it should be added that the remainder of the group of symptoms, commonly observed in this disease, is less strongly developed. No "lightning pains" have been felt. The boy reads type at the normal distance; the girl at half the normal distance. There is no diplopia; no strabismus; no failure of the muscles of the eye; the pupils are not dilated. Sensations of numbness or formication are absent. The girl "can feel when there is a wrinkle in her stocking," and can put her finger upon the thick sole of her shoe, pretty nearly at the spot where I tap it with a pencil; the boy feels the touch of two points, at a distance of two inches on the naked sole. On the fingers, tactile sensation is weakened, the points being felt only at one-third or one-half of an inch asunder. Pricking and tickling are plainly felt; the reflex jerking of the leg is normal in the girl, but violent in the boy. It is almost impossible to make the muscles of the legs contract, by the application of faradic stimulus to the peroneal nerves; this condition is more marked in the girl's case. The functions of the bladder and intestine are unimpaired. The arm muscles respond properly to the current, although the grasp of the hand is decidedly weak, perhaps one-half as strong as it should be. The boy is little emaciated; the girl is quite meagre, and has lateral curvature of the spine. Both are intelligent; their speech is hesitating, but distinctly articulated, suggesting a possible weakness and irregularity of the expulsive action of the chest, but not paralysis of any vocal organ. When the girl talks, her face moves in an exaggerated grimacing manner, which reminds one of the involuntary exaggeration of the motions of the legs in walking. The inference is readily drawn, that the posterior spinal roots are but slightly and secondarily affected, and that the disease is not of the "ascending" type. As respects the abolition of the faradic reaction, this is certainly an unusual symptom, and very curious when taken in connection with the retention of voluntary muscular power. To produce the galvanic reaction in the peroneal nerve, twenty-five and thirty cells were required, ten of which were sufficient in the case of a healthy man. For the girl, a rather weaker current sufficed. The flexors of the heel, although their reaction is very poor, preponderate slightly, giving to the feet the position of a talipes equinus, which is easily reducible. The boy is the worse of the two in this, and in most other respects. It remains to be said that a dozen applications of the galvanic treatment entirely failed to relieve these patients. Both have grown worse within a year.

EPILEPSY.

The following cases have interest on account of their apparent causation.

CASE 7.—C. A. J., shoemaker, æt. 20. General health, fair. "No relation of his ever had fits." Practised self-abuse for the first time in October, 1871—about five times in all; the epileptic attacks commenced in November, and have occurred once or twice a week ever since, except during one month, when he was taking bromide of potassium; they last twenty minutes, and are not preceded by a warning; total loss of consciousness. Came only twice.

CASE 8.—Anna M., type-sorter, æt. 19. Says there are many cases of lead-colic in the type foundry where she is employed. The strength of both hands is much impaired, but the wrists do not droop. The hands, feet and eyelids tremble. Great pallor of face, tongue and hands. Two years ago she had three fits, in which she lost consciousness; at present she has a dizzy turn almost every day, without warning; she sometimes falls, but does not lose consciousness.

ASTHENIA.

With very few exceptions, the patients classed under this head came "to be cured of their nervousness;" by which term may be under-stood a combination of muscular weakness, want of endurance, loss of mental vigor, general tremor, excitability of temper, and mental depression. The prominent causes, in forty-four cases, appeared to be the following, viz.: Abuse of liquor, tobacco, tea and coffee, and opium, or chloral, 10; self-abuse, 17; overwork and low diet, 11; childbearing, 4; overwork in school, 1; sunstroke, 1. The following are instances of concurrent causation:

Case 9.—P. S., laborer, æt. 30. In his own words—he "gets all of a tremble" when anybody speaks to him; is easily angered. "When anybody speaks quick and sharp to me, I fills all up inside, so I can't answer him; I gets a kind of choking; I turns red in the face, and I has to put down whatever I has in my hand." Has practised self-abuse for ten years, two or three times a week; says he left it off three months ago; no local derangement. Uses four ounces per week of the strongest tobacco, for chewing and smoking; but little spirit. By reducing his allowance of tobacco to one-fourth, and taking a pill of oxyd of zinc (gr. ij.) thrice a day, he recovered almost wholly in the course of a week; professed himself well, and did not come again.

Case 10.—L. K., slater, æt. 29. Excesses in drink, venery and the use of tobacco. Stands unsteadily; hands tremble when he tries to close them tightly; palpitations at night; talking in his sleep; depression of spirits. Gave up his tobacco for the most part; took 50 grains of bromide of potassium daily, and made great and rapid improvement.

In several cases galvanism was applied to the spinal cord; it acted in its usual manner, often producing an immediate sense of relief and invigoration which lasted for a day or two. Protracted applications (lasting fifteen or twenty minutes) have been made by way of experiment; as far as tried, the experiment appears fully justified by results.

Galvanization of the head is known to be capable of relieving local distress of various sorts, of which the following may serve as specimens:—

Case 11.—M. O'D., student, æt. 17. Has been a year in his seminary. Three months ago, began to suffer from headache, and a wearing pain in his eyes; the lines of the printed page ran together when he looked at them; he had to give up study. He cannot read fifteen minutes, at present, without a painful oppression over the brows. A tolerably strong galvanic current was passed from his forehead to one hand during three and one-half minutes. After this, he felt "a lightness" in his head, which in the course of twenty minutes gave place to a sense of relief from the oppression and tension. The routine of his seminary is as follows: Sleep and toilet, 9 hours; religious exercises, 1 hour; meals, 1 hour, 10 minutes; recreation, 2 hours; study and recitation, 10 hours, 50 minutes. No gymnastics. Half-holiday once or twice a week.

Case 12.—C. B., bar-tender, æt. 37. Drinks very little; appears sober. Over-work, irregular sleep, wet feet, for three months past. Of late, his head has felt heavy and hot, and has ached severely. Five days ago (i. e., August 23, 1872), his face was suddenly paralyzed on the left side, while the right became numb, and the right hand and right half of the face were much swollen. This happened on the evening of a most fatiguing day's work. The paralysis had greatly improved when I saw him. A current from five and seven cells was passed during two and one-half minutes, from the forehead to the back of the neck; immediately after which he was freed from a severe pressing headache in the brows and occiput. The relief lasted three days. Twelve more applications, in various methods, were made, with *immediate* sensible relief in almost every case; various tonics were also given; and eight months later he returned, saying he was quite well of his former trouble.

MENTAL DEPRESSION.

Case 13.—Mrs. A., æt. 32. Has suffered two months from depression of spirits, disturbed sleep, bad dreams, fits of crying, and a tendency to imagine that people are saying things to harm her. A year ago she was affected in the same way for two months. She talks like a perfectly sensible woman, understands the true nature of her symptoms, and must be considered quite sane. Is six months pregnant, anæmic and constipated. Tincture of iron and laxatives were employed for two weeks, without relief to the mental distress. Inhalation of nitrite of amyl—three drops, once or twice a day—was then commenced, and at the end of two weeks she was quite freed from her low spirits.

The case is mentioned, as recalling similar experiments made by Meynert upon cases of *developed* melancholia in the Vienna Asylum. Compare also the less positive results in seven cases of mania, melancholia and dementia, treated by the inhalation of nitrous oxyd; by Samuel Mitchell, M.D., in the first volume of West Riding Lunatic Hospital Reports.

It is proper here to express thanks to those whose liberal contributions have sustained the Dispensary. To those whose professional assistance has been freely rendered on its behalf, thanks are also due; among these may be mentioned Dr. E. T. Williams, Assistant Physician; Dr. O. F. Wadsworth, Ophthalmologist; and Messrs. Dunn and Dennett, of the medical school.

8 *Beacon Street, Boston.*

Report your Cases.—Every intelligent member of the profession should feel personally bound to contribute to its advancement. In this direction the following remarks, from Dr. Tilt's Address before the Obstetrical Society of London, are in point, and should be heeded:—

"Every now and then there crop up in everybody's practice 'representative' cases—cases which well illustrate a mode of treatment, or confirm some theory, or show the fallacy of another. These are the cases we want, and there can be no excuse for not recording them; for although many of you are too busy to write papers, all can carefully note down the particulars of a case, and we ought all of us to bring ourselves to feel it as a crime to let a little trouble interfere with the careful recording of an important case. If we [this Society] did nothing in the course of each year but to well sift a considerable number of such cases, and to issue them, stamped, as it were, with the seal of authority, we should be laboring most efficiently toward the intelligent reconstruction of medicine; for its imperfection undeniably depends on the deplorable inaccuracy with which cases are collected, if one can call cases the shreds and tatters of half-ascertained facts that we so often meet with in medical works."

Bibliographical Notices.

First Annual Report of the Dispensary for Skin Diseases. Boston. 1873.

A few weeks ago, we called attention to the report of Dr. Duhring's dispensary for skin diseases in Philadelphia. The publication of the first annual report of Dr. Wigglesworth's dispensary in this city affords the opportunity for an interesting comparison in respect to the occurrence and care of this class of affections in the two cities, which has been made in part only in the report under notice. At the time the former was opened, we believe there was no provision made for their special care in Philadelphia, neither hospital nor dispensary accommodation, so there seems to have been a real necessity for its creation; yet the number of patients for the first year was but 425, and during the second year 421. In our own city, when Dr. Wigglesworth opened his dispensary, there were already, well-established and in active operation, two special dispensaries for the treatment of skin diseases; the one in connection with the out-patient department of the City Hospital, the other at the Massachusetts General Hospital. All three are organized and conducted on the same plan, viz.: "the gratuitous medical treatment of the poor affected with diseases of the skin, and the advancement of the science of medicine as far as regards such diseases. Patients who are able, purchase their own medicines; those who are unable to do so, are supplied gratuitously." Dr. Wigglesworth's report shows the number of patients during his first year to have been 823; the number at the skin Department of the City Hospital during the year covered by its last annual report was 952; while at the Massachusetts General Hospital the number of cases (exclusive of several classes of cutaneous affections there treated in the surgical out-patient department) during the past year was 735. Thus against 2,510 cases of disease of the skin treated in Boston in special dispensaries and by specialists in dermatology, Philadelphia can show but 421 cases. This certainly demonstrates the superior advantages offered by Boston as a school for clinical instruction in this department. Moreover, were the same means used to announce to the public and to the medical profession the existence and objects of the two hospital dispensaries as have been employed to establish the private one, there is no doubt that this number might be largely increased.

The report states the intention of providing, at some future time, a hospital in connection with the dispensary, for the treatment of the more serious cases. There can be no question of the necessity of some provision for special hospital accommodation for these diseases. Upon this question, Dr. Duhring, in his report, remarks as follows:—

"Where patients are so seriously affected with obstinate and chronic diseases, but little good is to be expected from a mere dispensary treatment. For example, the patient applies for medical advice, perhaps once or twice a week, and, returning to his poverty-stricken home, finds that it is an utter impossibility for him to carry out the instructions which he has received from the physician. The various conveniences of a hospital are unknown to the small and crowded rooms of the poor, and hence it is not difficult to understand why treatment, under such circumstances, is so often unsatisfactory. Place these same cases in a well-appointed hospital, with the requisite care and attention which their trouble demands, and they will recover in one-half the time. That all diseases of the skin can be satisfactorily treated upon the so-called dispensary plan is an error; all can be relieved, and very many entirely restored to health, but there are forms of disease continually encountered where hospital accommodation, with competent nurses, alone can effect the desired result. It is for these sufferers that we need a temporary home, where the care so essential for their recovery may be obtained.

"Singular as the statement may seem, there is not a ward or bed among all the hospitals of Philadelphia (excepting the Almshouse), devoted to the treatment of skin disease—in fact, no institution where a poor man may apply and be sure of admission. At some of our hospitals, it is true, grave cases of cutaneous disease are now and then admitted, if there happen to be spare room; but, as a rule, such admission only occurs through some influence with the physicians in charge."

This statement, founded on the experience of an accomplished dermatologist, is literally true of Boston. That some provision should be made in our large and so-called general hospitals for the special treatment of skin diseases, would seem to be a necessity so clear that a plea for its establishment should be entirely unneeded. If those controlling such large charities do not recognize such a necessity, they discriminate between classes of the sick equally deserving, offering to one class the best trained skill for its relief, and refusing it to the other. The interests of humanity and medical education both urge the importance of a claim recognized by nearly all other cities in the civilized world.

The most noticeable features in the character of the patients and the nature of the diseases mentioned in the report are the very small proportion of children (but 71) and the almost entire absence of those affections which are generally found so difficult to cure and which form so large a class of those who generally resort to such dispensaries, as shown by the following results of treatment. Discharged, well, 499; still under treatment, 32; lost sight of, 292. "The latter class belonged, almost without exception, to the lighter forms of disease. It may safely be presumed that these patients were satisfied with the results of treatment; for it is well known that dispensary patients, when cured, rarely trouble themselves to report the fact. The cases still under treatment are also light cases, none of them belonging to the so-called 'chronic incurables.'"

The dispensary has made a very successful beginning.

A Treatise on the Principles and Practice of Medicine; designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College. Fourth Edition, carefully revised. Philadelphia: Henry C. Lea. 1873. 8vo. Pp. 1070.

In the present edition, this valuable work has been thoroughly revised, in parts re-written, and enlarged by the addition of new matter, causing an increase in the text of about seventy pages, which by no means, however, indicates the amount of new material, a good deal of the old having been necessarily omitted in consequence of the progress of medical science during the past five years. The additions and changes will be found scattered throughout the work, but especially in the section devoted to the Diseases of the Nervous System, which is an admirable summary of the present state of knowlege on this subject, so far as it is of importance to the medical practitioner. We notice particularly, among the additions in this department, an account of Pachy-meningitis and Sclerosis of the brain; and the chapters on Paraplegia, Locomotor Ataxia, Wasting Palsy and other subjects are enlarged and brought down to the present time.

As a condensed text book and work of reference on the subject of the Practice of Medicine, we are acquainted with nothing in the English language which will compare with it in accuracy and completeness; and no medical practitioner should be without it.

The American Chemist. A Monthly Journal of Theoretical, Analytical and Technical Chemistry. Philadelphia. 1873. Vol. III. No. 11.

The May number of this journal, received, contains, in addition to the usual class of articles (see this JOURNAL, May 1st, p. 453) two abstracts from *Pflüger's Archiv f. Physiologie*, by D. Ferrier, M.D., taken from the *Journal of the London Chemical Society.* One of these is by Pflüger, concerning the "Diffusion of Oxygen and the Process of Oxidation in the Organisms," contradicting Ludwig's statement, based on calculations of the comparative tension of oxygen in the lungs and tissues, "that the oxygen cannot disappear from the blood by diffusion alone, but that it must be used up by some reducing substance in the blood itself, as distinct from the tissues." Pflüger considers the wants of the cell as sufficient to account for the rapid diffusion of the oxygen from the blood to the tissues by the laws of diffusion alone, and finds Ludwig's calculations of the force of diffusion of oxygen from the lungs to the blood over-estimated, and that from the blood to the tissues under-estimated.

The other abstract is from an article by F. W. Dock, on the "Glycogenic Function of the Liver and its Relation to Diabetes," giving the results of some investigations on this subject which are not as yet completed. W.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Wills Ophthalmic Hospital, Philadelphia (for the year ending Dec. 31, 1872). Pp. 18.

Report of the Municipal Hospital (comprising statistics of 2,377 cases of smallpox). By Wm. M. Welch, M.D., Physician in charge. Philadelphia. 1873. Pp. 81.

Lijeros Apuntes sobre La Embriaguez, Considerada como Enfermedad por Dr. Enrique A. Frimont. Vera Cruz. 1873. Pp. 28.

The Forty-ninth Report of the Officers of the Retreat for the Insane at Hartford. 1873. Pp. 70.

"The Present Attitude of Medical Science." Annual Address before the Iowa Medical Society. By A. G. Field, M.D., President. 1873. Pp. 14.

Abstracts and Intelligence.

ANTAGONISM BETWEEN OPIUM AND BELLADONNA.—Dr. Johnston (*Hospital Reports*, Shanghai, March, 1872) has had great experience of opium poisoning and the ill effects of opium-eating. During the last seven years, he has treated upwards of three hundred cases of opium poisoning. He first employed atropia in 1869. He employed it hypodermically in the severer cases, where the patient is profoundly comatose. In milder cases, emetics, the stomach pump, cold douche and constant exercise are generally sufficient. It is in the worst cases, that atropia displays its wonderful effects; for instance, where the pupils are firmly contracted to a pin's point and immovable, the conjunctiva and cornea insensible to touch; the face pale, the lips, eyelids and nails livid; the pulse weak and irregular; the breathing slow and stertorous; the extremities cold. In such cases, he usually injects hypodermically half a grain of atropia. Within ten or twenty minutes the pupils begin slowly to dilate, and, after an hour or more, the face becomes flushed; the breathing soft, without stertor; and the pulse stronger. Within two hours, the full effects of the drug (atropia) are manifest, viz., widely dilated pupils, flushed face, hot skin, tranquil, slow breathing, diminished frequency and increased strength of pulse, followed by calm and tranquil sleep, from which the patient is easily awakened after three or four hours. If, within two hours, the first dose fails to dilate the pupils, flush the face, and render the breathing slow, steady and tranquil, he repeats the injection. In cases where the coma is not profound, he first employs a quarter of a grain of atropia, repeating the dose if the first be insufficient. He says, "I have observed very sudden and very unfavorable changes set in rapidly, even in the mildest cases of opium poisoning. This has happened so frequently, that I have come to the conclusion, whenever there is contraction of the pupil, and great drowsiness, after the evacuation of the contents of the stomach, it is always advisable to administer a small dose of atropia. I may remark, that in no instance have I seen any bad effects following the subcutaneous injection of atropia."—*London Medical Record*, April 9, 1873.

A NEW ECRASEUR.—Professor Dittel is at present making some experiments with a new and original kind of ligature which he applies to the removal of tumors and operations for fistula ani. The material employed is rubber, such as is commonly used by surgeons for drainage tubes. The tumors to which this method is especially applicable are those of the female breast and angiomas. In operating, the tumor should first of all be well circumscribed, in order that the ligature may be well applied; the rubber, having been moderately extended, is then applied around the base of the tumor, firmly tied, and left to itself. The ligature, by virtue of its elasticity, exerts a continuous pressure upon the arteries which bring nourishment to the tumor, thus causing it to atrophy, and finally severing it from its attachment. The surface that is left is covered with healthy granulation, and there is no discharge. When the ligature has cut through the base, and the tumor has fallen off, the ligature is found in the shape of a ring, lying on a smooth surface of healthy granulations. If it should be found difficult to isolate the tumor, an artificial base can be made by transfixing the tumor with needles, and applying the ligature below them.

Dittel, while giving the preference in most cases to the knife, claims several advantages for this plan, which are not possessed by the *ecraseur* of Chassaignac, or the galvanic cautery. Among these advantages may be mentioned the very small amount of hæmorrhage, as well as pain, the very small discharge which accompanies the process of separation, the cleanliness of the wound left behind, and, last of all, the cheapness of the tube.

In the case of fistula, the ligature will have cut its way through in from eight to fourteen days, and is found by the patient in his bed in the form of a ring—*Letter from Vienna in the Irish Hospital Gazette.*

Correspondence.

MALAPRAXIS.

MESSRS. EDITORS,—During the recent epidemic of smallpox, I was requested to vaccinate an infant four weeks old, said to be free from all disease, but very small and imperfectly developed. The child nursed well, and the function of digestion was well performed. Finding the upper arm rather puny, I decided to introduce the virus into the leg, in accordance with a custom which prevails in certain parts of Europe. The vaccine vesicles appeared in due time at the points scarified, and were accompanied by less than the usual amount of cutaneous inflammation. Upon the third day, however, the child began to evince signs of severe constitutional disturbance, such as fever, loss of appetite, &c. It continued to sink slowly, without showing symptoms of any constitutional disease, and died on the ninth day.

The case excited considerable interest in the vicinity, the family and neighbors arriving at the conclusion that death resulted from the selection of the leg, instead of the arm, as the place for vaccination. From the menacing looks and expressions encountered when the attempt was made to obtain an autopsy, I was led to suspect that an action might be brought against me for malpractice, and, being curious to ascertain whether my deviation from the customary method of performing vaccination could involve me in a charge for malapraxis, I was led to consult the standard authorities on medical jurisprudence.

The result of these researches was not particularly reassuring, for I found that it had actually happened in the United States that an action had been brought, and *damages recovered* from a medical man, under somewhat similar circumstances.

In the case referred to (Taylor, Medical Jurisprudence, ed. 1865, p. 502), some inflammation of the skin followed the operation, which, it was alleged, was performed nearer the elbow than usual. I append the extraordinary ruling of the judge on this occasion:—

"In performing the operation of vaccination or inoculation, the physician is liable for all consequences, if he neglects the usual precautions, or fails to insert the virus in that part of the arm *usually selected* for the purpose; notstanding many other parts of the body might be proved to be equally and even more suitable locations."

In view of the above decision, my only consolation is derived from the hope that an ability to take the poor debtor's oath may tend to effectually ward off any attack upon my purse. Yours with respect,

RUSTICUS.

Medical Miscellany.

M. **Broca** recommends the use of digital pressure on the main artery of the limb as the best means of relieving muscular spasm in cases of fractures.

Sir William Gull has been presented by the Empress Eugenie with a costly gold box, bearing the Imperial cipher in diamonds, and containing a pair of sleeve-links worn by the late Emperor Napoleon.

A **chair** of normal and pathological histology has been founded by the Spanish republican government in the University of Madrid, and endowed with a salary of 5,000 pesetas (£210). The medical faculty of the University of Valencia has protested against the establishment of a similar chair in that institution, on the grounds, *inter alia,* that the subjects are already taught by the several professors.

For upwards of forty years the ipecacuanha plant has been cultivated in the Royal Botanic Garden, Edinburgh; but it is only recently that the plant has been propagated. The continued destruction of the ipecacuanha plant in Brazil, and the risk of scarcity in the supply of this valuable remedy for dysentery in India, has called attention to the desirability of introducing its cultivation into the British possessions in India. Great numbers of the plant have, therefore, been sent from Edinburgh, and extensively distributed in India.—*Medical Times and Gazette.*

Female Doctors.—The *Pharmaceutical Journal* quotes the following couplet from the "Nugæ Canoræ Medicæ," where the poet laureate of the Edinburgh New Town Dispensary predicts—

> "An' when the leddies git degrees,
> Depen' upon 't there's nocht 'll please
> Till they hae got oor chairs an' fees,
>   An' there's an en' o' you an' me.
> For a' that ken the woman craiter
> Maun own it is her foremost faitur
> To tak' to lecturin' by natur';
>   An' hoo she'll do 't ye sune 'll see."

Beneficial Influence of Ammonia in Silvering Establishments and others where Mercury is used.—According to M. Meyer, ammoniacal gas has exerted a most happy effect on the health of the workmen in the great looking-glass factory of Chauny. Having observed by chance that the penetrating odor of this gas modified the suffocating odor of the workshops, he has directed, since 1868, that the floors of the various rooms be watered every evening with liquor ammoniæ. About half a litre is found to be sufficient for the purpose. The explanation is not very clear, but he vouches for the good that results from it.—*La France Médicale,* March, 1873.

The Clinical Society.—The last meeting of the session took place on Friday of last week, when several papers were read which gave rise to considerable discussion. A contribution by Dr. Greenhow, on the treatment of a case of diabetes by means of skimmed milk, was followed by a sharp passage of arms between Dr. Pavy and Dr. Donkin, which led to the protest of the President. Dr. Pavy expressed his utter disbelief in the skimmed milk treatment of disease; and said that, after a lengthened trial, he had come to doubt the good results alleged by Dr. Donkin to have been obtained in that gentleman's hands. He questioned the propriety of the author of the paper in lending his position to countenance the treatment by skimmed milk. Dr. Donkin, in reply, offered facilities for inquiry into the cases which had been cured or alleviated by the method of treatment which he advocated.—*British Medical Journal.*

Diagnosis of Phosphorus Poisoning by the Urine.—Dr. Poulet *(La France Médicale)* mentions the case of a man, æt. 65, who had been treated for two months for a supposed degeneration of the liver, with anæmia. Dr. Poulet examined the urine by adding strong nitric acid to it, and evaporating in a porcelain capsule over a spirit lamp. When the temperature was lowered the contents of the capsule became all at once inflamed, so that the capsule looked like a ball of fire. The residue, on analysis, gave all the reactions of phosphoric acid. Dr. Poulet comes to the conclusion that when phosphorus is taken into the system it is eliminated by the urine in the form of hypophosphoric acid, and that the method of analysis above described should be made use of in cases of suspected poisoning by phosphorus.—*Dublin Medical Press and Circular.*

NOTES AND QUERIES.

"A Country Doctor" is congratulated upon his powers of inferential deduction, but advised to re-read the sentence referred to, by the light of universal experience, according to which every disease of the skin, from acne to zoster, was, during the "panic," considered, or at least feared, by the people as being probably smallpox. E. W. Jr.

Are not the "Two Cases of supposed Tubal Pregnancy," referred to on page 518 in the Journal of June 5th, better explained if classed under the head of Pelvic Hæmatocele? I will refer the reporter to vol. v. Trousseau's Clinical Medicine as containing one of the best articles upon this topic. J. O. Whitney.

Pawtucket, R. I., June 23, 1873.

Disgusting Exaggeration.—"An enormous number of autopsies daily, at least ten"! *Vienna Correspondent of the New York Medical Journal.*

When will physicians cease to talk of their "infinite number of cases," "vast many instances," and the like? How can one be trusted in other matters who talks so loosely in this? Verb. Sap.

Ergotism.—Some weeks ago, any one who had seen a case of ergotism was requested to describe it. Once more, the inquirer would ask the description. Has any physician ever seen any bad effects from the use of ergot? How long had it been used and in what doses? Please Answer.

An Aurilave.—An instrument by this name is advertised in the shops to clean ears out with. They used to tell us that nothing smaller than the little finger should be put in the ear. Why.

Answer.—Because anything smaller than the little finger has a tendency to inflame the lining membrane of the ear. The frequent use of the aurilave will probably be followed by suppuration, and, finally, by deafness.

Mortality in Massachusetts.—*Deaths in fourteen Cities and Towns for the week ending June* 21, 1873.

Boston, 125—Charlestown, 15—Worcester, 14—Lowell, 15—Chelsea, 5—Cambridge, 13—Salem, 9—Lawrence, 8—Springfield, 4—Lynn, 13—Newburyport, 6—Somerville, 7—Fall River, 12—Haverhill, 2. Total, 248.

Prevalent Diseases.—Consumption, 42—pneumonia, 22—scarlet fever, 15.

Five deaths from cerebro-spinal disease are reported.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, June 28th, 102. Males, 59; females, 43. Accident, 4—apoplexy, 2—aneurism, 1—inflammation of the bowels, 1—disease of the bladder, 1—bronchitis, 2—inflammation of the brain, 2—disease of the brain, 5—cancer, 2—cerebro-spinal meningitis, 2—cholera infantum, 6—consumption, 14—convulsions, 1—debility, 1—diarrhœa, 2—dropsy of the brain, 3—dysentery, 2—epilepsy, 2—erysipelas, 1—scarlet fever, 6—typhoid fever, 5—disease of the heart, 2—disease of the kidneys, 2—inflammation of the lungs, 9—marasmus, 4—measles, 1—necrosis of leg, 1—old age, 4—paralysis, 1—prostatitis, 1—premature birth, 1—rheumatism, 1—pyæmia, 2—disease of the stomach, 1—syphilis, 1—tabes mesenterica, 1—ulcers of stomach, 1—whooping cough, 2—unknown, 2.

Under 5 years of age, 44—between 5 and 20 years, 9—between 20 and 40 years, 22—between 40 and 60 years, 16—over 60 years, 11. Born in the United States, 65—Ireland, 24—other places, 13.